## Kimley-Horn and Associates, Inc.

## Granary Corridor Analysis Summary

GRANARY CORRIDOR STUDY

Alternative	Limited Build	SEMI Access	SEMI Access Plus	Full Build	SEMI Access with Extended Greenway		SEMI Access Plus with Greenway		
					SEMI Access Extended Full Greenway	SEMI Access Extended Reduced Greenway	SEMI Access Plus Full Greenway	SEMI Access Plus Reduced Greenway	
Benefits	Daily traffic volumes on	Daily traffic volume reduced:	Daily traffic volume reduced:	Daily traffic volume reduced:	Daily traffic volume reduced:	Daily traffic volume reduced:	Daily traffic volume reduced:	Daily traffic volume reduced:	
	University Ave SE and 4 <sup>th</sup> St SE = 27,000-45,500 vehicles per day	3,000 vehicles on University Ave SE, Huron Blvd to TH 280 (-13%)	3,500 vehicles on University Ave SE, Huron Blvd to TH 280 (-15%)	4,000 vehicles on University Ave SE, Huron Blvd to TH 280 (-17%)	3,000 vehicles on University Ave SE, Huron Blvd to TH 280 (-13%)	3,000 vehicles on University Ave SE, Huron Blvd to TH 280 (-13%)	3,500 vehicles on University Ave SE, Huron Blvd to TH 280 (-15%)	3,500 vehicles on University Ave SE, Huron Blvd to TH 280 (-15%)	
			1,000 vehicles on University Ave SE/4 <sup>th</sup> St SE, 17 <sup>th</sup> Ave SE to Huron Blvd (-2%)	2,500 vehicles on University Ave SE/4 <sup>th</sup> St SE, 17 <sup>th</sup> Ave SE to Huron Blvd (-6%)			1,000 vehicles on University Ave SE/4 <sup>th</sup> St SE, 17 <sup>th</sup> Ave SE to Huron Blvd (-2%)	1,000 vehicles on University Ave SE/4 <sup>th</sup> St SE, 17 <sup>th</sup> Ave SE to Huron Blvd (-2%)	
				5,500 vehicles on University Ave SE/4 <sup>th</sup> St SE, I-35W to 17 <sup>th</sup> Ave SE (-12%)					
	5 key intersections operate at LOS E/F during 2030 peak hours	1 intersection on University Ave SE improves from LOS E to LOS C in 2030 PM peak	2 intersections on University Ave SE improve from LOS E to LOS C/D in 2030 PM peak	3 intersections on University Ave SE improve from LOS E to LOS C/D in 2030 PM peak	1 intersection on University Ave SE improves from LOS E to LOS C in 2030 PM peak	1 intersection on University Ave SE improves from LOS E to LOS C in 2030 PM peak	2 intersections on University Ave SE improve from LOS E to LOS C/D in 2030 PM peak	2 intersections on University Ave SE improve from LOS E to LOS C/D in 2030 PM peak	
	9.9 min travel time from TH 280 to I-35W in 2030 PM peak	0.9 min travel time savings from TH 280 to I-35W in 2030 PM peak	1.0 min travel time savings from TH 280 to I-35W in 2030 PM peak	2.0 min travel time savings from TH 280 to I-35W in 2030 PM peak	0.9 min travel time savings from TH 280 to I-35W in 2030 PM peak	0.9 min travel time savings from TH 280 to I-35W in 2030 PM peak	1.0 min travel time savings from TH 280 to I-35W in 2030 PM peak	1.0 min travel time savings from TH 280 to I-35W in 2030 PM peak	
	4,000 feet of trail	8,000 feet of trail	11,000 feet of trail	11,000 feet of trail	4,000 feet of trail	4,000 feet of trail	7,000 feet of trail	7,000 feet of trail	
					8,000 feet of greenway	8,000 feet of greenway	5,000 feet of greenway	5,000 feet of greenway	
		Consistent with 2009 Grand Rounds Byway Master Plan	Consistent with 2009 Grand Rounds Byway Master Plan	Consistent with 2009 Grand Rounds Byway Master Plan	Consistent with 2009 Grand Rounds Byway Master Plan	Consistent with 2009 Grand Rounds Byway Master Plan	Consistent with 2009 Grand Rounds Byway Master Plan	Consistent with 2009 Grand Rounds Byway Master Plan	
	Limited green space	3.8 acres green space	7.8 acres green space	9.9 acres green space	14.9 acres green space	7.5 acres green space	13.5 acres green space	9.7 acres green space	
	Vehicle access to 6 redevelopment parcels	Vehicle access to 12 redevelopment parcels	Vehicle access to 15 redevelopment parcels and 4 University parcels	Vehicle access to 15 redevelopment parcels and 7 University parcels	Vehicle access to 12 redevelopment parcels	Vehicle access to 12 redevelopment parcels	Vehicle access to 15 redevelopment parcels and 4 University parcels	Vehicle access to 15 redevelopment parcels and 4 University parcels	
	Land use projections = 220 households and 700 jobs	Land use projections = 550 households and 1,750 jobs	Land use projections = 690 households and 2,650 jobs	Land use projections = 1,330 households and 4,500 jobs	Land use projections = 980 households and 3,400 jobs	Land use projections = 980 households and 3,400 jobs	Land use projections = 1,010 households and 3,580 jobs	Land use projections = 1,010 households and 3,580 jobs	
Impacts	Requires 0.2 acres of railroad right-of-way	Requires 3.9 acres of railroad right-of-way	Requires 9.4 acres of railroad right-of-way	Requires 13.6 acres of railroad right-of-way	Requires 13.6 acres of railroad right-of-way	Requires 8.8 acres of railroad right-of-way	Requires 13.6 acres of railroad right-of-way	Requires 11.5 acres of railroad right-of-way	
				At-grade rail crossing near 17 <sup>th</sup> Ave SE					
				Traffic volumes increased					
				1,500-2,000 vehicles per day on 2 <sup>nd</sup> St SE, 8 <sup>th</sup> Ave SE, and 11 <sup>th</sup> Ave SE					
	Cost \$5.4 million	Cost \$21.8 million	Cost \$37.7 million	Cost \$57.6 million	Cost \$62.7 million	Cost \$45.9 million	Cost \$61.6 million	Cost \$52.9 million	

Granary Corridor Cost/Benefit Analysis: Scoring Summary	Limited Build	SEMI Access	SEMI Access Plus	Full Build	SEMI Access with Extended Greenway  SEMI Access Extended Full Greenway  SEMI Access Extended Reduced Greenway		SEMI Access Plus with Greenway  SEMI Access Plus Full Greenway  SEMI Access Plus Reduced Greenway	
Vehicular Traffic (24 Possible Points)								
Vehicular Traffic Score: Reduction in peak hour vehicle-hours of delay,; Reduction in AADT on University Ave and 4th St; Reduction in peak hour travel times; Reduction in vehicle/pedestrian/bicycle conflicts; Improved vehicular access to existing land uses	7.9	13.6	16.9	20.4	13.7	14.0	16.7	17.0
Other Modes (Ped/Bike/Transit) (13 Possible Points)								
Other Modes (Ped/Bike/Transit) Score: Increase in length of pedestrian/bicycle facilities; Improved pedestrian/bicycle connections to destinations; Improved connections to transit (bus and LRT); Improvement in multi-modal amenities (lighting, landscaping, separation from vehicle traffic)	2.8	5.9	8.8	10.1	11.3	10.7	10.8	10.6
Railroad (5 Possible Points)								
Railroad Score: Minimizes impacts to railroad operations and right-of-way Livability	4.9	3.8	2.2	1.0	1.0	2.6	1.0	1.6
(24 Possible Points) Livability Score: Increases in public and open space; Improved connections to Mississippi River; Improved connections within and between neighborhoods; Improved visual quality; Increased green space and biodiversity; Traffic volume increases on local and collector roadways; Avoidance of impacts to historic features Economic Development	10.4	11.8	15.5	16.3	20.5	18.9	20.6	19.9
(24 Possible Points)  Economic Development Score: Improved access to redevelopment areas;	5.0	9.8	16.3	22.8	17.3	17.3	19.2	19.2
Increased number of households and jobs adjacent to new roadways	0.0	<i>,</i> , , ,		22.0	.,,,	.,,,	.,,,,	1,7,2
Environmental Quality (5 Possible Points)								
Environmental Quality Score: Improvements in air quality (reduced congestion); Improvements in noise (reduced traffic volumes near residential land uses); Reduction in contamination (clean up of existing sites); Improvements in storm water quality and reduction in run-off	2.7	3.0	3.0	3.3	3.2	3.1	3.2	3.1
Plan Consistency (5 Possible Points)								
Plan Consistency Score: Support of existing City, University of Minnesota, Park Board, neighborhood, University District Alliance, and other plans	1.0	2.2	3.7	4.9	3.6	3.5	4.2	4.1
Total Score (100 Possible Points)	34.7	50.1	66.4	78.8	70.6	70.1	75.7	75.5
Project Costs								
Total Project Costs	\$5,400,000	\$21,800,000	\$37,700,000	\$57,600,000	\$62,700,000	\$45,900,000	\$61,600,000	\$52,900,000
Cost per Point (Total Project Cost/Total Score)	\$156,000	\$435,000	\$568,000	\$731,000	\$888,000	\$655,000	\$814,000	\$701,000
Cost/Benefit Ratio (Comparison to Limited Build)	1.00	0.36	0.27	0.21	0.18	0.24	0.19	0.22

## Notes:

- Possible points for each scoring category are based on stakeholder input.
   Roadway alternatives all assume sidewalk and trail facilities parallel to the roadway.
   Greenway alternatives assume no vehicular roadway or traffic within the greenway segment.
- ${\it 4. Alternatives were evaluated based on forecast 2030 conditions.}$